



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,726	01/16/2004	George Rodriguez	2004B005	6549

23455 7590 06/07/2005

EXXONMOBIL CHEMICAL COMPANY  
5200 BAYWAY DRIVE  
P.O. BOX 2149  
BAYTOWN, TX 77522-2149

EXAMINER

BROWN, JENNINE M

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/758,726

Applicant(s)

RODRIGUEZ ET AL.

Examiner

Jennine M. Brown

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 18-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/6/04; 1/17/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Information Disclosure Statement***

The information disclosure statements (IDS) submitted on 12/6/2004 and 7/17/04 were considered by the examiner.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 6-11, 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "at least some of" in claim 1 is a relative term which renders the claim indefinite. The term "at least some of" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. There is no definite amount or ratio given of how much of the capping agent would not form a support bound activator.

The claims 3 and 6-8 fail to disclose a lower limit of Si-OH functional groups and the term "about" renders the claim indefinite because "about" could mean an amount above that claimed rather than "less than or equal to" which precedes it. It is unclear whether this would mean +/- 10, 0.1, 0.01, 0.001, etc. Furthermore, the term "about" before the temperature limits are vague as to how much of a variance in temperature is

Art Unit: 1755

included in the range. For example would the temperature range of 200 to 900 degrees or 350 to 750 degrees be included or excluded?

Claim 9 is vague and indefinite because it is unclear from the specification or claims what would comprise the "inner surface" or "outer surface" of the particle. Furthermore, what would the concentrations on the inner to outer surface be? There are no definitive amounts or ratios given and it is unclear how one of ordinary skill in the art would be able to ascertain the difference between the "inner" OH groups and the "outer" OH groups.

Claims 10, 11, 15 and 16 recite an improper Markush group, "selected from the group comprising:" and/or "comprising at least one of the foregoing". According to MPEP 2173.05(e), "It is improper to use the term "comprising" instead of "consisting of"." Ex parte Dotter, 12 USPQ 382 (Bd. App. 1931).

Claim 17 has an improper transitional phrase "wherein". Furthermore the claim language is also vague and indefinite "wherein essentially all of the capping agent does not form a support bound activator." If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964).

***Claim Rejections - 35 USC § 102***

Art Unit: 1755

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ward (US 5885924 A).

Ward discloses a catalyst support comprising the result of the combination of a) a support comprising hydroxyl groups; b) a capping agent comprising a boron containing Lewis acid; and c) an ionic activator, wherein at least some of the capping agent does not form a support bound activator. (col. 2, l. 6-col. 3, l. 30) Inorganic oxide carriers such as silica are disclosed (col. 3, l. 62-65). Calcination of said support is also disclosed (col. 4, l. 12-13; example 15, col. 17, l. 38-50). A fluoride salt is disclosed (col. 17, l. 57). The range of –OH groups per gram of support is less than about 10 mmol per gram of support, preferably between about 0.1 to 5 mmol per gram of support (col. 19, l. 6-14). Perfluorophenylboron is disclosed (col. 5, l. 62). Ammonium cation to the borate anion is also disclosed (col. 5, l. 9-67).

Claims 1-5, 9, 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by McConville, et al. (US 6265505 B1).

McConville, et al. disclose a catalyst support comprising the result of the combination of a) a support comprising hydroxyl groups; b) a capping agent comprising a boron containing Lewis acid; and c) an ionic activator, wherein at least some of the capping agent does not form a support bound activator. (col. 5, l. 52-col. 9, l. 53) Supports disclosed are silica, alumina, silica-alumina, magnesia, titania, zirconia, zeolites, talc and clays (col. 8, l. 29-33). Calcination can be tailored so that coupling agents may be employed to cap hydrogen bonded pairs of silanol groups present in the less severe calcining conditions of temperatures below 400 degrees C (col. 8, l. 4-18). Loading amounts depend on the temperature of calcination and are disclosed as from less than 0.1 mmol to 3.0 mmol activator to support (col. 7, l. 51-62). Activators disclosed are tri(n-butyl) ammonium tetrakis (pentafluorophenyl) boron, trisperfluorophenyl boron, trimethylammonium (col. 6, l. 45-59). Placement on the support is disclosed (col. 7, l. 5-8).

Claims 1-7, 10-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Specia (US 6524988 B2).

See entire document. Specia discloses a fluorided support composition (col. 2 l. 15-17) having a fluorine concentration in the range from 0.01 to 10.0 milimoles of fluorine per gram of support (col. 4, l. 10-16; col. 14, l. 35-56; col. 15, l. 35-47), wherein the support is selected from the group consisting of silica, alumina, talc, clay, etc. (col. 2, l. 20-25); a non coordinating anion bound to the support and a metallocene. The anionic compound is a highly fluorinated tris-arylborane such as

Art Unit: 1755

tris(perfluorophenyl) borane (col. 12, l. 10-35) and the fluoriding agent is ammonium tetrafluoroborate (col. 3, l. 63-col. 4, l. 7). Ionizing activations may also be used (col. 10, l. 39-49; col. 11, l. 11-25). (col. 28, l. 53-col. 34, l. 7)

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 10-15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent 6,524,988 B2 and claims 1-8 of US 6,667,272 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are a genus of the patented claims. The '988 patent is drawn to a fluorided support composition having a fluorine concentration in the range from 0.01 to 10.0 millimoles of fluorine per gram of support, wherein the support is selected from the group consisting of silica, alumina, talc, clay, etc.; a non coordinating anion bound to the support and a metallocene. The anionic compound is a highly fluorinated tris-

Art Unit: 1755

arylborane such as trisperfluorophenyl borane and the fluoriding agent is ammonium tetrafluoroborate. The '272 patent is drawn to a support which is fluorided with a non coordinating anion selected from highly fluorinated tris-arylborne compounds and mixtures thereof, supported on inorganic compounds such as talc, clay, silica and alumina and the fluorine concentration is in the range of from 0.01 to 10.0 milimoles of fluorine per gram of support.

***Prior Art of Record***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5939347 A discloses a supported catalyst activator comprising a neutral 3 coordinate compound which may be a boron compound cationic counter ion (e.g.  $[C]^+ [MR_3-O-Support]^-$  where the cation may be ammonium or anilinium cations, the support is an inorganic oxide support, and the anion is a boron based compound such as tri(pentafluorophenyl)boron.

US 6432863 B2 discloses a supported catalyst activator comprising a halogenated organic compound reacted with an inorganic oxide support to make a halogenated support and an ionic activator compound comprising a boron and ammonium group.

US 6632770 B2 discloses a supported catalyst activator comprising an fluorinated organoborane compound with a siloxane backbone and an aniline based anion.

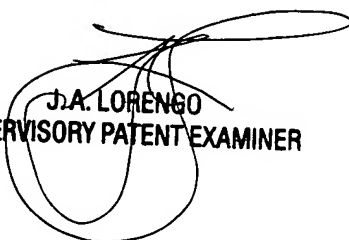


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

  
J.A. LORENGO  
SUPERVISORY PATENT EXAMINER